Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (Currently Amended) A method for thermomechanical treatment of steel rods, wherein [[the]] a starting material is heated to a heating temperature that is above a recrystallization temperature, austenitized, held for equalization of temperature, then deformed and finally quenched to martensite and tempered, said method comprising:

~~starting with a~~ using round steel [[rod;]] rods as the starting material;

equalizing the heating temperature of the starting material ~~said rod~~ over its length;

causing said [[rod]] rods to be transformed by skew rolling them, while they remain ~~remaining~~ substantially straight, such that a predetermined twisting of the material in a marginal area and a desired transformation gradient are achieved over a cross section of the rod, and whereby, after a critical degree of transformation is exceeded, dynamic recrystallization processes take place; and

reheating the rods to a temperature ~~about~~ above Ac3, in order finally to be hardened and tempered.

Claim 2. (Previously Presented) The method of claim 1, wherein the material is heated at a rate between 100° - 400°K/s.

Claim 3. (Previously Presented) The method of claim 1, wherein the starting material is heated to a temperature between 700° and 1100°C.

Claim 4. (Previously Presented) The method of claim 1, wherein the heating is performed inductively.

Claim 5. (Previously Presented) The method of claim 1, wherein the equalization of the heating temperature of the rod takes place for at least 10 seconds.

Claim 6. (Previously Presented) The method of claim 1, wherein the temperature difference over the length of the rod does not exceed 5 K.

Claim 7. (Currently Amended) The method of claim [[1,]] 16, wherein the heating temperature of the rod is kept constant virtually up to its entry into [[the]] a roll gap of said rolls of the skew rolling stand.

Claim 8. (Previously Presented) The method of claim 1, wherein the transformation is performed by a single skew rolling step.

Claim 9. (Previously Presented) The method of claim 1, wherein the skew rolling of the rod is performed with an average degree of ~~degree of~~ stretching λ of at least 1.3.

Claim 10. (Currently Amended) The method of claim 8, wherein the maximum transformation occurs in the marginal area ~~amounts to~~ of the rods between 0.65 and 1.0 times the diameter of the rod, and the maximum degree of transformation ψ is at least 0.3.

Claim 11. (Previously Presented) The method of claim 1, wherein, in the skew rolling, a maximum local temperature elevation of 50°K is not exceeded.

Claim 12. (Previously Presented) The method of claim 1, wherein the direction of the twisting of the structure in the marginal region of the particular round rod corresponds to the main direction of tension of a component stressed by torsion.

Claim 13. (Currently Amended) The method of claim 12, wherein the direction of ~~twist~~ twisting of the structure in the marginal region, with respect to the axis of the round rod, amounts to 35 – 65 degrees of angle.

Claim 14. (Previously Presented) The method of claim 1, wherein the structural distribution over the cross section of the finish-worked round rod leads

to a property profile, which is adequate for the tension profile over the cross section in the case of flexural and/or torsional stress.

Claim 15. (Currently Amended) The method of claim 1, wherein the skew rolling is performed in a temperature range of 700° - ~~1000°C.~~ 1150°C.

Claim 16. (Currently Amended) The method of claim 1, wherein:

said skew rolling is performed in a skew rolling stand;

rolls of the skew rolling stand are adjusted in one of an axial and a radial direction during the transformation operation; and

round rods are produced with a diameter which varies over their length.

Claim 17. (Previously Presented) The method of claim 1, wherein during a reheating above Ac3 following skew rolling, a temperature difference over the rod length is limited to a maximum of 5°K.

Claim 18. (Previously Presented) The method of claim 1, wherein said steel rods comprise spring steel.

Claims 19.-20. (Cancelled)

Claim 21. (Previously Presented) The method of claim 1, wherein the skew-rolled, substantially straight rod is wound into a coil spring.

Claims 22.-23. (Cancelled)

Claim 24. (Currently Amended) The method of claim 21, wherein the winding and/or a bending is performed in the same heat [[hot]] after ~~there crystallization~~ the recrystallization and before the hardening and tempering.

Claim 25. (Currently Amended) A method for thermomechanical treatment of steel rods, said method comprising:

starting with a round steel rod;

heating said steel rod to a temperature that exceeds a recrystallization temperature of steel of said rod; and

causing formation of a desired gradient in the degree of recrystallization of said steel of said rod over a cross section of said rod, with a marginal area having a fine-grained martensite structure, whereby said rod has a cross sectional strength profile that reaches a maximum value in said marginal area of said rod;

wherein said step of causing formation of said desired gradient comprises,

equalizing the temperature of said steel rod over its entire length;

maintaining said steel rod at said equalized temperature;

skew rolling said rod while it remains straight, said steel rod entering said skew rolling ~~while it remains~~ at said equalized temperature, whereby a predetermined twisting of said steel in said rod in said marginal area, and said desired gradient, are achieved.

Claim 26. (New) A method for producing steel coil springs or stabilizers, wherein a starting material is heated to a heating temperature that is above a recrystallization temperature, austenitized, held for equalization of temperature, then deformed and finally quenched to martensite and tempered, said method comprising:

using round steel rods as the starting material;

equalizing the heating temperature of the starting material over its rod length;

causing said steel rods to be transformed by skew rolling them while they remain substantially straight, such that a predetermined twisting of the material in a marginal area and a desired transformation gradient are achieved over a cross section of the rod, whereby after a critical degree of transformation is exceeded, dynamic recrystallization processes take place;

reheating the rods to a temperature above Ac3;

winding the rods to form a coil spring or bending them into a stabilizer; and

hardening and tempering the wound or bent rods.

Claim 27. (New) The method according to claim 26, wherein a direction of the twisting of the structure in the marginal region of the round rod corresponds to the main direction of tension of the coil spring or the stabilizer stressed by torsion.

Claim 28. (New) The method of claim 26, wherein a direction of twisting of the structure in the marginal region is oriented with respect to the axis of the round rod, within a range of 35° - 65°.

Claim 29. (New) The method of claim 26, wherein the skew rolling is carried out in a single step.

Claim 30. (New) The method of claim 26, wherein the skew rolling of the rod is performed with an average degree of stretching λ of at least 1.3.

Claim 31. (New) The method of claim 26, wherein the maximum transformation occurs in the marginal area of the rods that lies between 0.65 and 1.0 times the diameter of the rod and is at least 0.3.

Claim 32. (New) The method of claim 26, wherein the material is heated at a rate between 100° - 400°K/s.

Claim 33. (New) The method of claim 26, wherein the heating temperature is between 700° and 1100°C.

Claim 34. (New) The method of claim 26, wherein the heating is performed inductively.

Claim 35. (New) The method of claim 26, wherein the equalization of the heating temperature of the rod takes place for at least 10 seconds.

Claim 36. (New) The method of claim 26, wherein the temperature difference over the length of the rod does not exceed 5°K.

Claim 37. (New) The method of claim 26, where the heating temperature of the rod is kept constant virtually up to its entry between said rolls of the skew rolling.

Claim 38. (New) The method of claim 26, wherein, during the skew rolling, a maximum local temperature increase of 50°K is not exceeded.

Claim 39. (New) The method of claim 26, wherein the skew rolling is performed in a temperature range of 700° - 1100°C.

Claim 40. (New) The method of claim 26, wherein:

the skew rolling is performed in a skew rolling stand;

rolls of the skew rolling stand are adjusted in one of an axial direction and a radial direction during the transformation operation; and

the round rods are produced with a diameter, which varies over their length.

Claim 41. (New) The method of claim 26, wherein, during the reheating step, the temperature difference over the rod length is limited to a maximum of 5°K.

Claim 42. (New) The method of claim 26, wherein the starting material of the rods is spring steel.

Claim 43. (New) The method of claim 26, wherein the starting material of the rods is silicon-chromium steel.

Claim 44. (New) The method of claim 26, wherein the starting material of the rods is microalloyed steel.